

Appl. No. 10/538,136
Reply to Office Action of August 6, 2008

SUBSTANCE OF INTERVIEW

The interview is correctly reflected in the Examiner's summary. A new Office Action was subsequently issued.

REMARKS/ARGUMENTS

An Information Disclosure Statement and fee are filed herewith consideration thereof is requested.

Claim 1 is amended to make concrete the requirement that the thermosetting conductive paste be thermoset or cured in order to form the electronic part. A corresponding clarification has been added to Claim 4. As described in the specification e.g. page 4, lines 25-30, the thermosetting conductive paste is cured (see also Claim 4). This is added to Claim 1 to clarify the recitation.

Referring to the background of the invention as described on pages 1-3 of the specification, there are a number of methods for making a device such as claimed herein. One method involves sintering a conductive paste for example at temperatures of 500 to 900°C. The second and third method (end of page 1 and top of page 2) use thermosetting conductive pastes. A silver powder (or other high melting metal powder) is used in the second method. The third method supplies the silver particles by using a pyrolytic organo metallic material.

The disadvantage of the first method is explained near the end of page 2 and on the top of page 3. The disadvantage relates to the fact that a sintered product is produced requiring high temperature and having other disadvantages related to the sintered structure. The second method, of which the present invention can be considered an improvement, uses only high melting point metal in the resin as the metal particles. The resulting device lacks a solid-phase diffusion resulting in a junction of the internal electrode with the external electrode which is poor, due to the low curing temperature. Because of the advantages of such a process to produce good results (see first paragraph on page 3 of the specification), the present inventors have, in essence, improved on it, by including a metal powder having a melting point of 300°C or less as a low melting point powder component to be mixed with the high melting point component. The resulting product has advantages without the disadvantages of the product made by the prior art method, to form a superior finished product. In particular, the faults of the product made by the prior art processes are avoided while retaining the advantage of the method (see specification page 3, lines 2-15). In other words, the present invention is a product

which has improved physical and electrical properties over the prior art product, which properties result from the method by which it is made.

Claims 1-2 and 4-6 are rejected under 35 USC 103(a) as being unpatentable over MT Shioya in view of Murata.

MT Shioya discloses a heat-curing type conductive paste containing thermosetting resin (paragraphs 1, 10, 14, etc.). The paste of MT Shioya is applied to a terminal of an electronic part, and then dried at 200-250°C in the working example of MT Shioya.

Murata discloses a sintering type conductive paste (Abstract). The paste of Murata is used for forming a hot-wire heater on the rear window of a car for defogging. The paste of Murata contains no thermosetting resin. It is applied to a glass substrate, and then sintered at 700°C, in the working example of Murata.

A heat-curing type conductive paste and a sintering type conductive paste are completely different. Techniques for a sintering type conductive paste could not be applied to a heat-curing type conductive paste and the reaction to the heat is substantially different. It is, therefore, not obvious to use

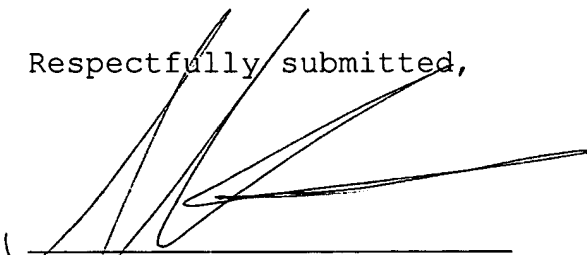
Appl. No. 10/538,136
Reply to Office Action of August 6, 2008

the conductive paste of Murata in the process of MT Shioya.
Curing a resin paste is not analogous to sintering a paste, nor
are the problems to be solved, similar.

In view of the above, the rejections are avoided. Allowance
of the application is therefore respectfully requested.

Frishauf, Holtz, Goodman
& Chick, P.C.
220 Fifth Ave., 16th Floor
New York, NY 10001-7708
Tel. No.: (212) 319-4900
Fax No.: (212) 319-5101
MJC:sg

Respectfully submitted,



MARSHALL J. CHICK
Reg. No. 26,853

Encs. Information Disclosure Statement
Form PTO-2038 - \$180